

What Is Claimed Is:

1. An Internet printing method for a client to control the printing of a print server via the Internet using  
5 the Internet Printing Protocol, comprising:

a step of opening a server site of said print server in a proxy unit on said Internet according to a request from one of said client and said print server;

a step of accessing said server site using said Internet  
10 Printing Protocol with said client; and

a step of converting the printing service request of said client using said Internet Printing Protocol into a protocol which allows circumventing the firewall of said print server, and transferring said converted printing  
15 service request to said print server according to said access.

2. The Internet printing method according to Claim 1, further comprising a step of returning the execution result of said printer server for said printing service request to  
20 said proxy unit, and returning the execution result to said client from said proxy unit using said Internet Printing Protocol.

3. The Internet printing method according to Claim 1,  
25 further comprising a step of connecting said proxy unit and said print server according to the connection request from said print server.

4. The Internet printing method according to Claim 3,  
wherein said proxy unit plays the role of a server and said  
print server plays the role of a client when said proxy unit  
5 and said print server are connected, and said proxy unit  
plays the role of a client and said print server plays the  
role of a server when said printing service is requested  
after said connection.

10 5. The Internet printing method according to Claim 1,  
further comprising:

a step of transmitting a printing command from said  
client to said print server using a protocol which can  
circumvent said firewall; and

15 a step of connecting said proxy unit and said print  
server according to the connection request from said print  
server corresponding to said printing command.

20 6. The Internet printing method according to Claim 1,  
further comprising:

a step of transmitting a printing command from said  
client to said proxy unit using said Internet Printing  
Protocol;

25 a step of transferring said printing command from said  
proxy unit to said print server using a protocol which can  
circumvent said firewall; and

a step of connecting said proxy unit and said print

server according to the connection request from said print server corresponding to said transferred printing command.

7. The Internet printing method according to Claim 1,  
5 further comprising a step of constantly connecting said proxy unit and said print server according to the connection request from said print server.

8. An Internet printing system for a client to  
10 control the printing for a print server via the Internet using the Internet Printing Protocol, comprising:

said client for communicating at least by using the Internet Printing Protocol;

said print server which is protected by a firewall on  
15 said Internet and for executing a printing request; and

a proxy unit for opening a server site of said print server according to a request from one of said client and said print server, converts the printing service request of said client using said Internet Printing Protocol into a  
20 protocol which allows circumventing the firewall of said print server at the access of said client to said server site by said Internet Printing Protocol, and transfers the request to said print server.

25 9. The Internet printing system according to Claim 8, wherein said print server returns the execution result for said printing service request to said proxy unit and said

proxy unit returns said execution result to said client using said Internet Printing Protocol.

10. The Internet printing system according to Claim 8,  
5 wherein said proxy unit is connected to said print server according to the connection request from said print server.

11. The Internet printing system according to Claim 10,  
10 wherein said proxy unit plays the role of a server and said print server plays the role of a client when said proxy unit and said print server are connected, and said proxy unit plays the role of a client and said print server plays the role of a server when said printing service is requested after said connection.

15 12. The Internet printing system according to Claim 8, wherein said client transmits a printing command to said print server using a protocol which can circumvent said firewall, and said proxy unit connects with said print server  
20 according to the connection request from said print server corresponding to said printing command.

13. The Internet printing system according to Claim 8,  
25 wherein said client transmits a printing command to said proxy unit using said Internet Printing Protocol, and said proxy unit transfers said printing command to said print server using a protocol which can circumvent said firewall,

and connects with said print server according to the connection request from said print server corresponding to said transferred printing command.

5        14. The Internet printing system according to Claim 8, wherein said proxy unit is constantly connected with said print server according to the connection request from said print server.

10        15. A proxy unit for a client to control the printing for a print server via the Internet using the Internet Printing Protocol, comprising:

15        a server site of said print server to be opened according to the request from one of said client and said print server; and

20        an exchanger for converting a printing service request of said client by the Internet Printing Protocol to a protocol which allows circumventing the firewall of said print server at the access of said client to said server site by said Internet Printing Protocol, and for transferring the request to said print server.

25        16. The proxy unit according to Claim 15, wherein said exchanger receives the execution result of said print server for said printing service request and returns to said client by said Internet Printing Protocol.

17. The proxy unit according to Claim 15, wherein said proxy unit connects with said print server according to the connection request from said print server.

5 18. The proxy unit according to Claim 17, wherein said proxy unit plays the role of a server and said print server plays the role of a client when said proxy unit and said print server are connected, and said proxy unit plays the role of a client and said print server plays the role of a  
10 server when said printing service is requested after said connection.

19. A printer server for a client to control printing via the Internet using the Internet Printing Protocol,  
15 comprising:

a network interface unit for communicating; and  
a processing unit for requesting to a proxy unit  
installed on said Internet to open a server site of said  
print server, receiving a printing service request from said  
20 proxy unit where a printing service request of said client by Internet Printing Protocol is converted into a protocol which allows circumventing the firewall of said print server at the access of said client to said server site by said Internet  
Printing Protocol, and executing said printing service  
25 request.

20. The print server according to Claim 19, wherein

said proxy unit plays the role of a server and said print server plays the role of a client when said proxy unit and said print server are connected, and said proxy unit plays the role of a client and said print server plays the role of a server when said printing service is requested after said connection.